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The Hidden Headache

Recognizing Temporomandibular Joint Problems



Nothing reduces your quality of life like head pain. It can limit your ability to work, enjoy your family, and frequently impacts your overall health. It can inhibit your ability to stay active and exercise. Medications used to control the pain can have unpleasant side effects. Unfortunately, many

patients with ongoing head pain symptoms have no clear diagnosis. A frequently overlooked cause of pain in the head and face is the jaw or temporomandibular joint (TMJ).

TMJ problems can cause pain over a wide area of the face, head, and neck. The pain is often very distant from the jaw and is commonly mistaken for other conditions such as vascular migraine, sinus, or neck problems. Postural changes often occur in the upper cervical region secondary to prolonged TMJ muscle restrictions, and these postural stresses add to the pain problem.

The TMJ is the most active joint in the body. It moves 1500 to 2000 times a day when we chew our food or speak. Chewing produces strong compressive and torsional forces in the jaw joint. The TMJ also operates in a very precise fashion to create speech. Common activities you perform during the day and injuries to the TMJ itself lead to pain in the head and face.

Our TMJ joints are often mistreated during daily activities. We rest our head on our hands and compress the joint. Sleeping face down often pushes the jaw to one side for prolonged periods of time. In physical therapy, patients with chronic neck pain often demonstrate how they self manipulate their neck by pushing or pulling on the jaw.

The TMJ is vulnerable to many types of traumatic injuries. Acceleration-deceleration accidents that occur in car accidents can pull the TMJ apart and cause damage to the muscles and other soft tissue structures. Direct trauma from a fall or strike to the head can create irritation of the TMJ. Damage to the teeth can produce mechanical changes in the bite and greater stress to the TMJ.

Many patients with TMJ pain brux or clench the jaw. They are often unaware of this bruxing habit and how regularly they tighten the jaw muscles. Bruxing frequently occurs while the patient is sleeping. The sustained tension bruxing creates on the muscles, meniscus, and soft tissue structures of the TMJ can perpetuate head and facial pain.

Deciding how to treat a TMJ problem can be a frustrating task for a patient. At present, there is less than 100% agreement among the different health care professionals on how to treat TMJ pain problems. In my communications with periodontists, prosthodontists, oral surgeons, general dentists, physicians, and fellow physical therapists, all agree that the most conservative, non-invasive treatment is the best place to start. On the next page are some suggestions on conservative treatment of TMJ related pain.

Michael S. O'Hara, P.T., O.C.S., C.S.C.S.

Conservative TMJ Care

Many people are unaware of how far the jaw joint should be able to move. You can have a tight and poorly functioning TMJ, just like you can have a tight and poorly functioning shoulder or hip. You should be able to open your mouth so the bottom and top teeth are 3.5 to 4.0 centimeters apart and be pain free. The lower jaw should be able to protract beyond the top teeth by half a centimeter. The lower jaw should also be able to move side to side at least one centimeter. If you fail to reach any of these range of motion parameters, try the conservative mobility drills listed below to restore TMJ motion.

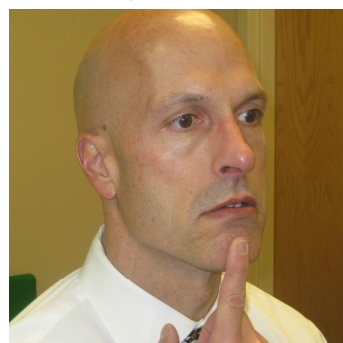
Jaw Hinging Drill

Place the tongue on the roof of the mouth. Gently open and close the jaw without moving the tongue off the roof of the mouth. You will be able to open the jaw about two centimeters. Perform 20 repetitions three times a day.



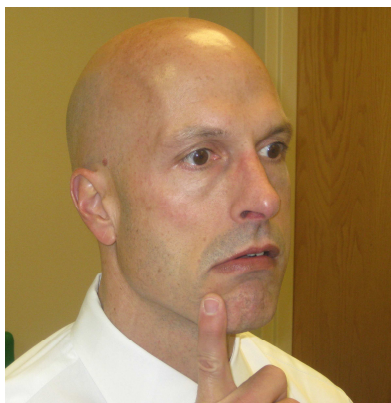
Protraction Action Drill

Relax the muscle of the neck and jaw. Place the tip of the index finger on the front of the chin. The finger should create no more than two pounds of force into the jaw. Gently protract the lower jaw forward against the finger. Hold in the protracted position for three seconds and then allow the lower jaw to retract. Perform five repetitions three times a day.



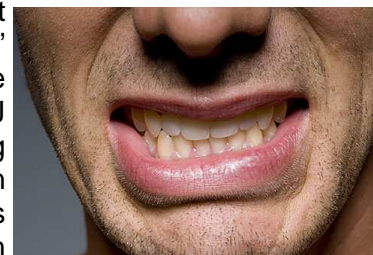
Lateral Deviation Drill

Relax the muscle of the neck and jaw. Place the tip of the index finger on the right side of the jaw. The finger should create no more than two pounds of force into the jaw. Gently deviate the lower jaw to the right against the resistance created by the finger. Hold in the deviated position for three seconds and then allow the lower jaw to return to the resting position. Repeat on the left side. Perform five repetitions three times a day.



Manage Bruxing

TMJ patients that clench the jaw or “brux” generally have more difficulty managing TMJ related pain. During the day, the patient can be made aware of this behavior and perform relaxation, and mobility drills to control the bruxing. Unfortunately, the bruxing often returns when they sleep. A night “bite splint” fitted by the dentist to limit TM joint loading can be very valuable in controlling pain. Meditation, relaxation and other “body calming” activities can reduce the psychological stress that seems to aggravate bruxism. A regular program of exercise has been shown to produce a decrease in the frequency of bruxing. During periods of increased emotional or physical stress, nocturnal bruxing often becomes the most difficult aspect of a patient’s treatment for head and facial pain. Medications can reduce the incidence of bruxing during sleep, and are often the only answer during these episodes of greater stress.



Face Plant



Ron injured his neck in a snow skiing fall. He landed face first and slid about 100 feet before coming to a stop. Luckily, Ron was

wearing a helmet. He was initially treated with pain medications and anti-inflammatory medications, but when the pain began to move down his arm, the doctor referred him for physical therapy.

Ron reported increased arm and neck pain following a busy day at work. For years prior to this incident, he was bothered by intermittent right side head pain that he attributed to sinus problems. Since the fall,

his head pain was much more frequent and more intense. Ron had right arm weakness and very limited cervical motion. His jaw opening was restricted to 2.3 centimeters, and pain in the right side of the head was recreated with sustained or repeated right lateral deviation of the jaw. The muscles underneath the temporomandibular joint were very sensitive to palpation.

The pain in Ron's arm and neck resolved after six sessions of manual therapy and exercise instruction. Ron was surprised that a home program of TMJ mobility exercises and positional awareness drills also resolved his head pain. At the end of three weeks of therapy, his jaw opening was at 3.5 centimeters and his lateral jaw deviation no longer created pain. Three months post treatment, Ron stated that he had continued his TMJ exercises, and he no longer had the problems with right side head pain.

ACL Prescription For Prevention

Hosted at Milford and Fenton Physical Therapy, *ACL Prescription For Prevention* is a participatory clinic designed to teach female athletes basic exercises to safeguard against anterior cruciate ligament injury. The primary goal of any athletic training program is reducing the risk of injury. Since we know how and why ACL tears occur, we can create programs of exercise to address the specific needs of the female athlete. Most college strength and conditioning programs have instituted these programs. Unfortunately, high school age girls endure the greatest number of ACL tears. To truly make any difference in the number of ACL injuries in women's sports, we need to start with preventative training at far younger ages.



The clinic is open to girls from 12 to 18 years of age. Parents need to register their daughters at either Milford Physical Therapy or Fenton Physical Therapy before the day of class.

Fenton Physical Therapy
810-750-1996

Saturday, June 11, 2011
10:00 am

Milford Physical Therapy
248-685-7272

Saturday, June 18, 2011
11:00 am

Join Our Email List

This newsletter, published monthly, is available by email. If you would like to be added to our email list, simply give your email address to any staff member or send your request to bohara430@earthlink.net. You will receive the newsletter, as well as updates on events at our physical therapy clinics and fitness center.

404 Rounds Drive
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Hours
Mon-Thur: 5:30am-10pm
Friday: 5:30am-9:00pm
Saturday 8am-5pm
Sunday 8am-2pm

Treadmill Tactics



We just installed new treadmills at Fenton Fitness, and the feedback from members has been great. The technology on these new modern treadmills is amazing. They have heart rate monitors, computerized training programs, and suspended running decks. Innovative engineering has made treadmill training one of the most popular

gym activities in America. As a Physical Therapist that works with plenty of gym members, I have some treadmill training advice.

“You Cannot Get Fit By Running You Must Be Fit To Run.” Diane Lee, P.T.

Running is a high level fitness activity. To run for any duration and remain injury free, you must consistently have excellent joint mobility, strength, muscle endurance, and core stability. Every mile run on a treadmill involves 600 to 700 foot contacts, and every strike must decelerate forces of 2-3 times bodyweight. If you are just getting back into exercise, start with walking on the treadmill. If you want more intensity, bring on the incline and practice walking uphill. Work on restoring your lower extremity mobility/strength and only then, slowly, add running.

Treadmill Training Can Put Your Hips to Sleep

The hips are the center point of your functional mobility. Our hips are designed to move in three planes; forward and backward, side to side, and ro-

tation. Treadmill walking or running occurs in only one plane—you move straight ahead. The belt on a treadmill moves below you, so unlike running outside, you really do not push yourself forward. On a treadmill, you succeed by getting off the ground to permit the belt to move under you. Many of the devoted treadmill runners I have evaluated have weak and tight hips. If you treadmill, make some time to work on strengthening your hips in all planes of motion. See one of our trainers for suggestions.

Holding On Promotes Head, Lower Back, and Neck Pain

Every day we see patients in our physical therapy clinics with headache, lower back, and neck pain problems. Interviews with these patients often reveal that they use a treadmill and hold onto the unit's handles or rails. Holding on while on a treadmill produces cumulative stress through your spine and pelvic girdle. If performed long enough and with enough frequency, this stress can create the sudden onset of head, neck, or lower back pain that hits you “for no reason”, or when “I just bent over”. Holding on also greatly reduces (40-50%) the training effect of a treadmill, so you get less exercise benefit for the time you spend working out. Holding on while walking uphill on a treadmill is one of the worst cardio activities I can imagine.

Too Much Of One Thing is a Bad Thing

Running or walking for 30 minutes on the treadmill produces improvement in only one fitness parameter. Many of the clients I consult with on fitness programs spend too much time on the cardio end of the gym and not enough time getting stronger or more flexible. Try to balance the stress of treadmill training with other forms of exercise. Devote an equal or greater amount of your workout time developing better mobility, strength, core stability, and balance. Even Dr. Cooper, the inventor of the term “aerobics”, says that beyond 12 miles a week on a treadmill, you get minimal extra health benefit.

Michael S. O'Hara, P.T., O.C.S., C.S.C.S.